

NOTE: If you own a 1985 or later model, first check the Supplement at the back of the book for any new service information.

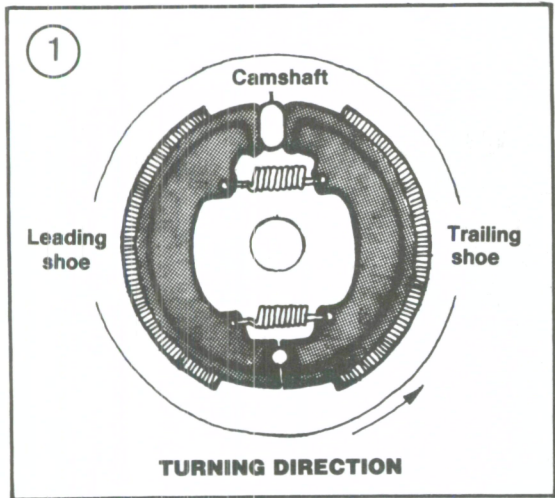
CHAPTER NINE

BRAKES

Both the front (if so equipped) and rear brakes are drum type. **Figure 1** illustrates the major components of the brake assembly. Activating the brake hand lever or foot pedal pulls the cable and/or rod which in turn rotates the camshaft. This forces the brake shoes out into contact with the brake drum. The rear brake can be activated either by the lever on the left-hand side of the handlebar or by a foot pedal.

All models except the ATC70 are equipped with a parking brake. This is the rear brake that is activated by the hand lever. Pulling the brake lever on all the way and flipping the lock into position will hold the rear brake on.

Lever and pedal free play must be maintained on both brakes to minimize brake drag and premature brake wear and maximize braking effectiveness. Refer to Chapter Three for complete adjustment procedures.



Both front and rear brake cables must be inspected and replaced periodically as they will stretch with use until they can no longer be properly adjusted.

Table 1 is at the end of this chapter.

FRONT BRAKE

Disassembly

Refer to **Figure 2** for this procedure.

1. Remove the front wheel as described in Chapter Eight.
2. Pull the brake assembly straight up and out of the brake drum.
3. Remove the brake shoes from the backing plate by firmly pulling up on the center of each shoe.

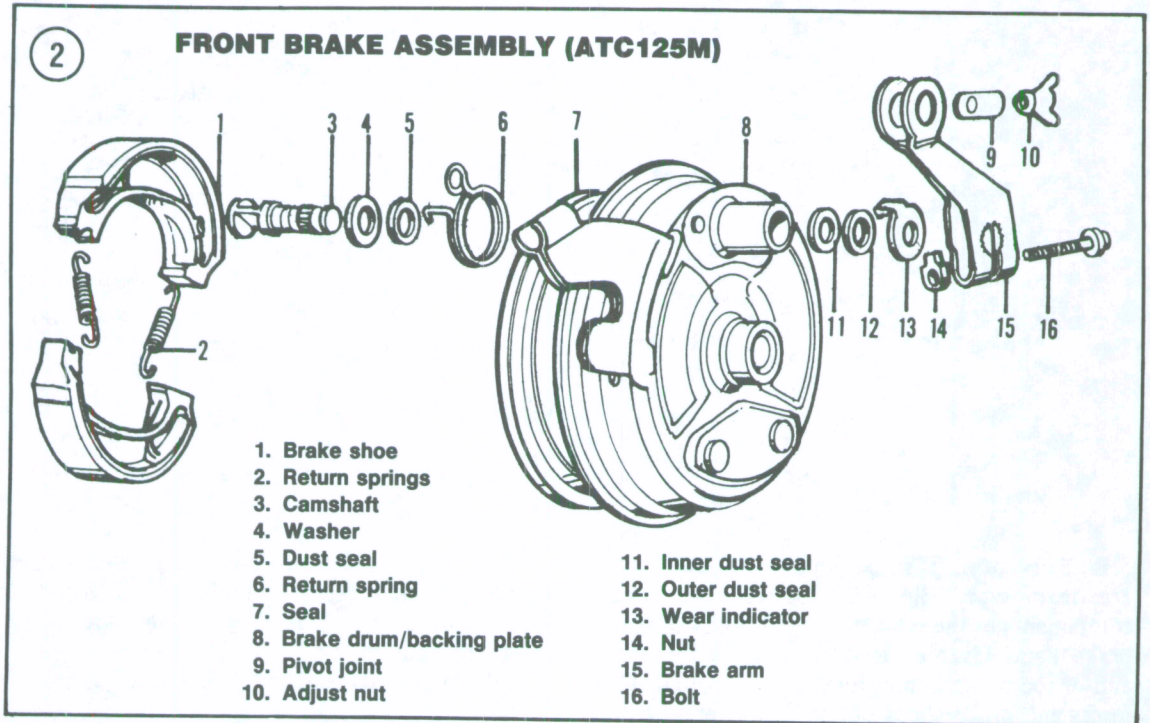
NOTE

Place a clean shop rag on the linings to protect them from oil and grease during removal.

4. Remove the return springs and separate the shoes.
5. Loosen the bolt (**Figure 3**) securing the brake lever to the cam.
6. From the outside surface of the brake panel, remove the lever, wear indicator and cam outer dust seal from the camshaft.
7. From the inside surface of the brake panel, remove the return spring and withdraw the camshaft and washer.

Inspection

1. Thoroughly clean and dry all parts except the linings.
2. Check the contact surface of the drum (**Figure 4**) for scoring. If there are grooves deep enough to snag a fingernail, the drum should be turned and



new shoes fitted. This type of wear can be avoided to a great extent if the brakes are disassembled and thoroughly cleaned after riding the vehicle in water, mud or deep sand.

NOTE

If oil or grease is on the drum surface, clean it off with a clean rag soaked in lacquer thinner—do not use any solvent that may leave an oil residue.

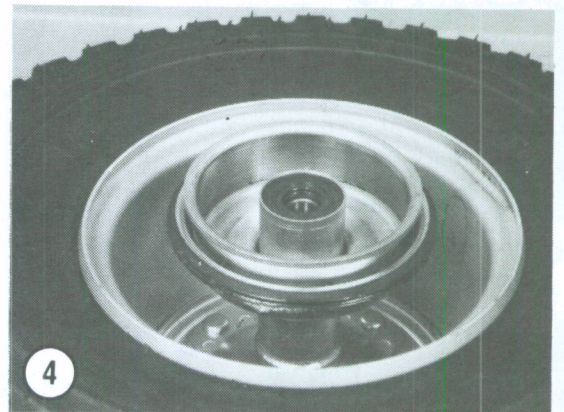
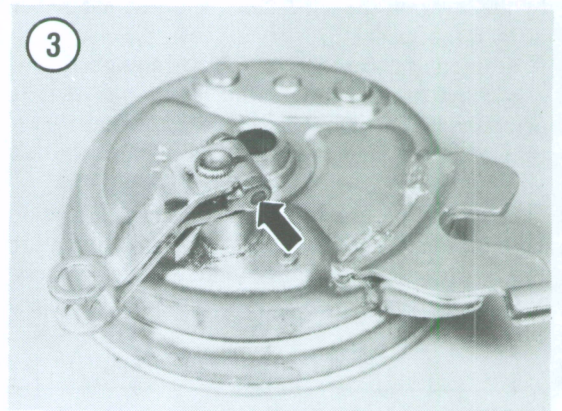
3. Use a vernier caliper (**Figure 5**) and check the inside diameter of the drum for out-of-round or excessive wear. The standard new brake drum ID and the service limit are listed in **Table 1**. Turn or replace the drum as necessary.

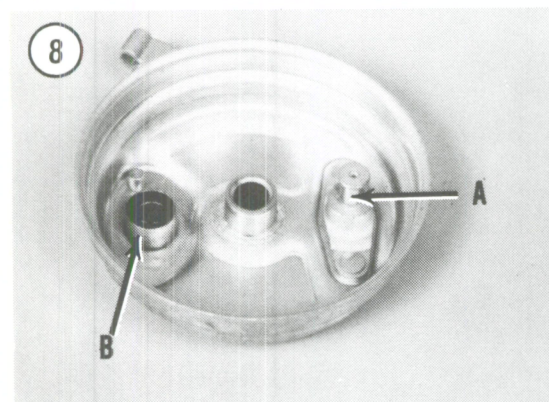
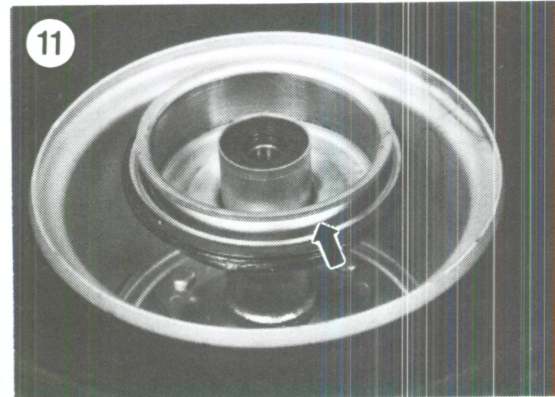
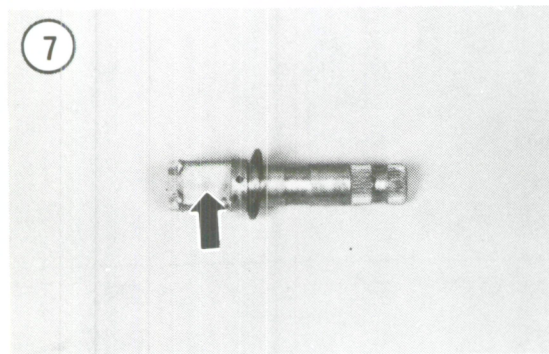
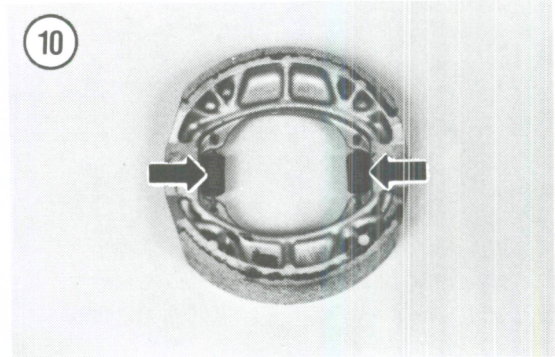
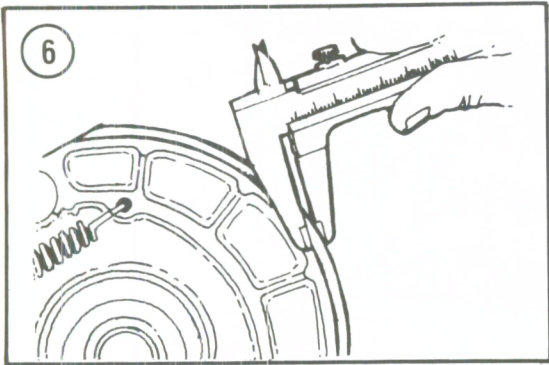
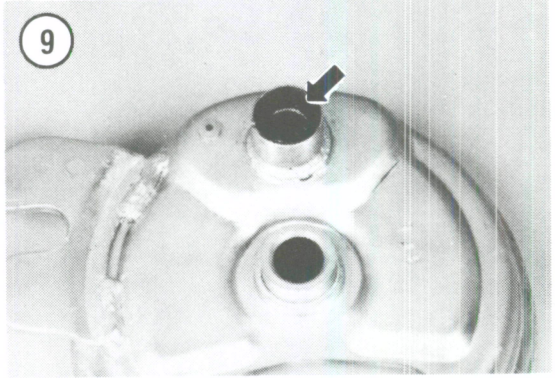
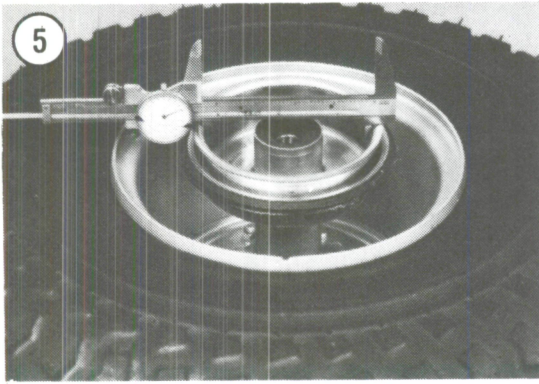
4. If the drum is turned, the linings will have to be replaced and the new linings arced to the new drum contour.

5. Inspect the linings for imbedded foreign material. Dirt can be removed with a stiff wire brush. Check for traces of oil or grease. If they are contaminated, they must be replaced.

6. Use a vernier caliper (**Figure 6**) and measure the thickness of the brake linings from the metal shoe. They should be replaced if worn to the service limit listed in **Table 1** or less.

7. Inspect the cam lobe (**Figure 7**) and the pivot pin area of the shaft (A, **Figure 8**) for wear and corrosion. Minor roughness can be removed with fine emery cloth.

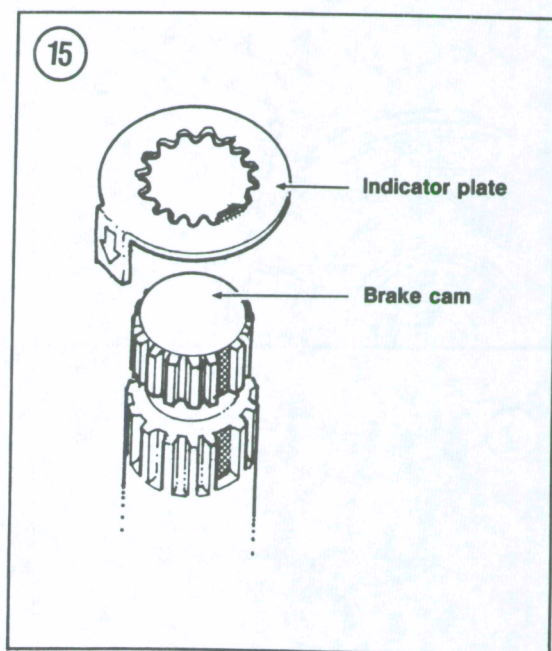
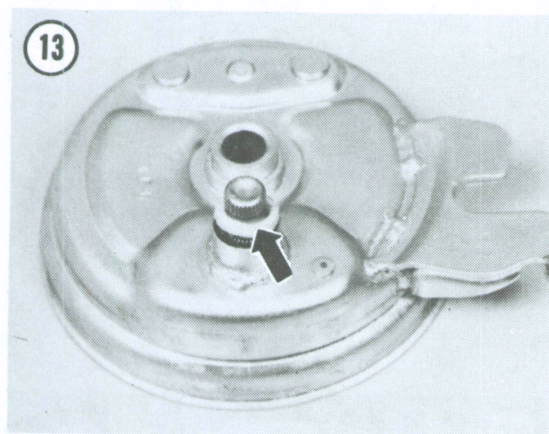
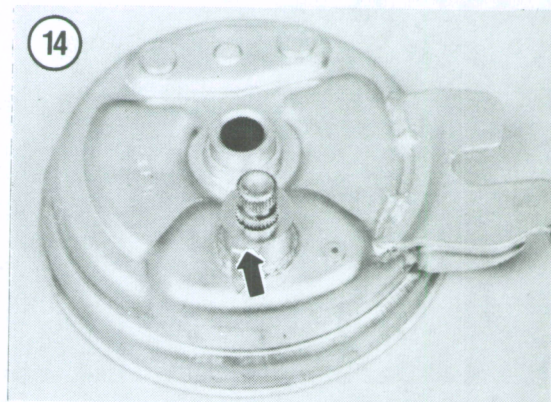
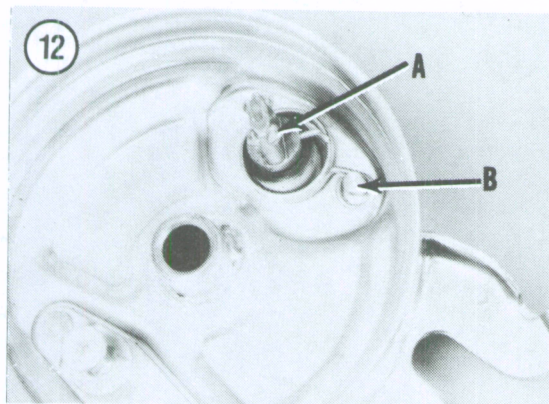




8. Check the dust seal (B, Figure 8) on the inside surface and the inner dust seal (Figure 9) on the outside surface of the brake panel. Replace if damaged or torn.

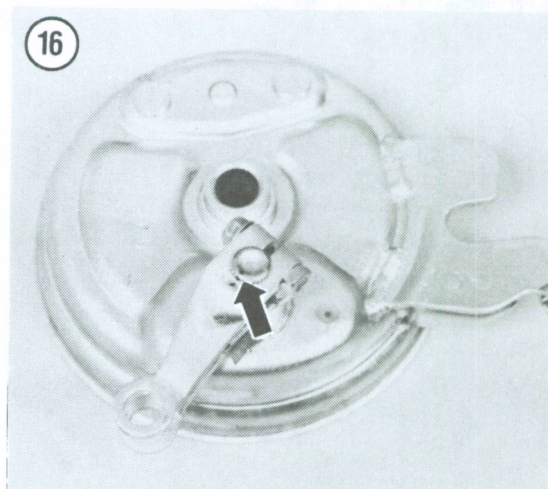
9. Inspect the brake shoe return springs for wear (Figure 10). If they are stretched, they will not fully retract the brake shoes from the drums, resulting in a power-robbing drag on the drums and premature wear of the linings. Replace as necessary and always replace as a pair.

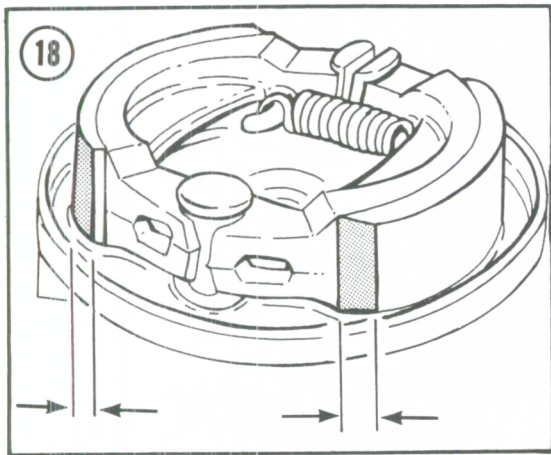
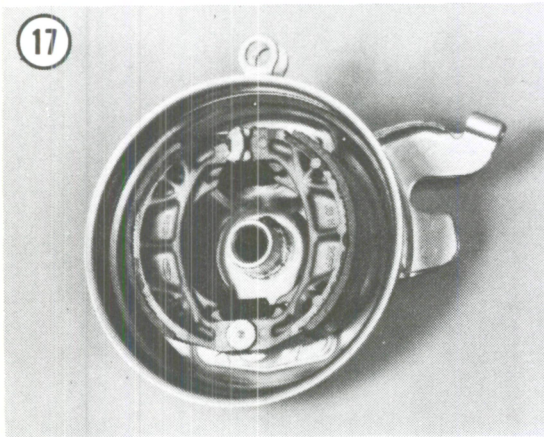
10. Inspect the outer perimeter seal (Figure 11) on the brake drum. Replace it if torn or deteriorated.



Assembly

1. Apply a light coat of molybdenum disulfide grease to the cam prior to installation and to the pivot post in the brake panel (A, **Figure 8**). Avoid getting any grease on the brake plate where the linings come in contact with it.
3. Install the washer onto the cam and insert the cam into the brake panel. Make sure the cam seals are still in position in the brake panel.
4. Install the hook on the return spring into the hole in the camshaft (A, **Figure 12**) and place the loop onto the locating pin (B, **Figure 12**) on the brake panel.
5. Install the outer dust seal (**Figure 13**) onto the camshaft.
6. Install the wear indicator (**Figure 14**) correctly onto the cam as shown in **Figure 15**.
7. When installing the brake lever onto the brake cam, be sure to align the punch marks (**Figure 16**) on the two parts.
8. Hold the brake shoes in a "V" formation with the return springs attached and snap them in place on the brake backing plate. Make sure they are firmly seated on it (**Figure 17**).



**NOTE**

If new linings are being installed, file off the leading edge of each shoe a little (Figure 18) so that the brake will not grab when applied.

9. Install the brake panel assembly into the brake drum.

10. Install the front wheel as described in this chapter.

NOTE

When installing the front wheel, be sure that the brake panel is indexed onto the locating pin on the right-hand fork leg. This is necessary for proper brake operation.

11. Adjust the front brake as described in Chapter Three.

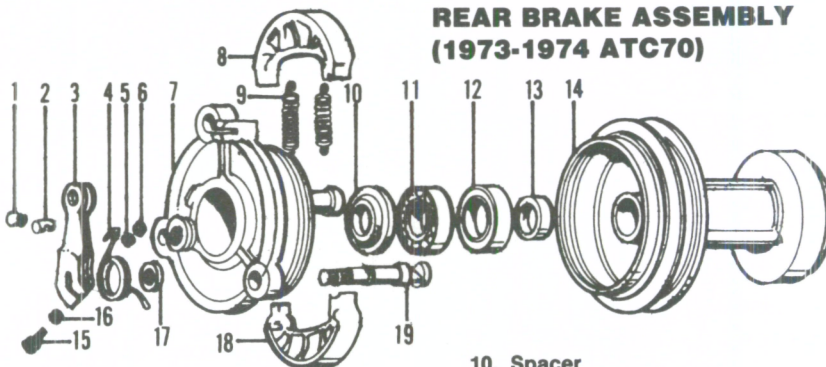
REAR BRAKE

The rear brake is a single-leading shoe type. In order to service the rear brake, the majority of the rear axle components must be removed from the frame in order to gain access to the brake parts.

Removal/Disassembly/Installation (70 cc)

Refer to Figure 19 and Figure 20 for this procedure.

- 1A. On 1973-1974 models, perform the following:
- Remove the rear axle as described in Chapter Eight.

REAR BRAKE ASSEMBLY (1973-1974 ATC70)

- Adjust nut
- Pivot pin
- Brake arm
- Return spring
- Washer
- Nut
- Right-hand panel
- Brake shoe
- Return spring

- Spacer
- Bearing
- Oil seal
- Seal
- Brake drum/rear axle hub
- Bolt
- Washer
- Dust seal
- Brake shoe
- Camshaft

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